

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P334126

Luminaire Tested: **S124DS-S575D830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P334126  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DS-S575D830-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT LED LUMINAIRE, DROP SATIN WHITE DIFFUSER  
PENDANT/SURFACE/WALL MOUNT, 575 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2060.5 lumens  
Efficiency: N/A  
Efficacy: 109.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

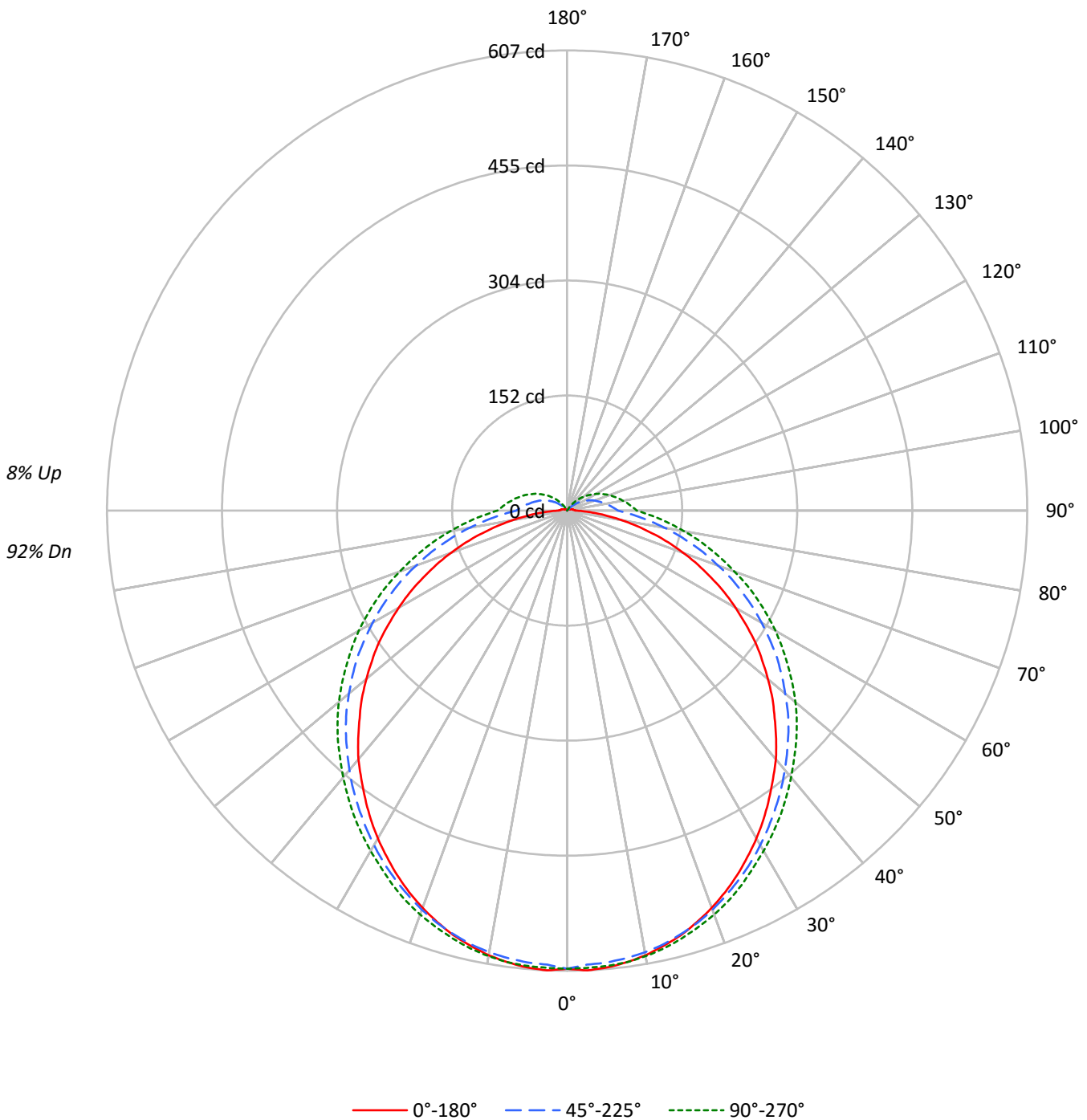
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P334126

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    | 20 |    |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |    |    | 10 | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50 | 30 | 10 | 0  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |
| 0   | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 101 | 101 | 101 | 95 | 95 | 95 | 92 |
| 1   | 105 | 100 | 95  | 91  | 102 | 97  | 93  | 89  | 91  | 88  | 84  | 86  | 83  | 80  | 81 | 79 | 77 | 74 |
| 2   | 95  | 86  | 79  | 73  | 92  | 84  | 77  | 71  | 79  | 73  | 68  | 74  | 70  | 66  | 70 | 67 | 63 | 60 |
| 3   | 87  | 75  | 67  | 60  | 83  | 73  | 65  | 59  | 69  | 62  | 57  | 65  | 60  | 55  | 62 | 57 | 53 | 50 |
| 4   | 79  | 66  | 57  | 50  | 76  | 65  | 56  | 49  | 61  | 54  | 48  | 58  | 52  | 47  | 55 | 49 | 45 | 43 |
| 5   | 73  | 59  | 50  | 43  | 70  | 58  | 49  | 42  | 55  | 47  | 41  | 52  | 45  | 40  | 49 | 44 | 39 | 37 |
| 6   | 67  | 53  | 44  | 37  | 64  | 52  | 43  | 37  | 49  | 42  | 36  | 47  | 40  | 35  | 45 | 39 | 34 | 32 |
| 7   | 62  | 48  | 39  | 33  | 60  | 47  | 38  | 32  | 45  | 37  | 32  | 43  | 36  | 31  | 41 | 35 | 30 | 28 |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 41  | 33  | 28  | 39  | 32  | 28  | 37 | 31 | 27 | 25 |
| 9   | 54  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 38  | 30  | 25  | 36  | 29  | 25  | 34 | 29 | 24 | 22 |
| 10  | 50  | 37  | 29  | 24  | 49  | 36  | 29  | 23  | 35  | 28  | 23  | 33  | 27  | 23  | 32 | 26 | 22 | 20 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°   |
|-----|------|------|-------|
| 0°  | 4879 | 4879 | 4879  |
| 5°  | 4903 | 4848 | 4887  |
| 10° | 4882 | 4849 | 4893  |
| 15° | 4847 | 4836 | 4882  |
| 20° | 4791 | 4814 | 4872  |
| 25° | 4726 | 4781 | 4853  |
| 30° | 4656 | 4750 | 4832  |
| 35° | 4576 | 4723 | 4836  |
| 40° | 4515 | 4708 | 4842  |
| 45° | 4419 | 4713 | 4883  |
| 50° | 4343 | 4717 | 4938  |
| 55° | 4267 | 4753 | 5001  |
| 60° | 4141 | 4786 | 5125  |
| 65° | 4008 | 4862 | 5287  |
| 70° | 3850 | 4999 | 5542  |
| 75° | 3631 | 5299 | 6079  |
| 80° | 3431 | 6072 | 7266  |
| 85° | 3325 | 8772 | 11282 |



TEST NUMBER: P334126

CATALOG NUMBER: S124DS-S575D830-4F0-1E-UDD-D

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 57.3   | 2.8       |
| 10°-20°   | 164.1  | 8.0       |
| 20°-30°   | 248.1  | 12.0      |
| 30°-40°   | 300.1  | 14.6      |
| 40°-50°   | 317.3  | 15.4      |
| 50°-60°   | 298.6  | 14.5      |
| 60°-70°   | 247.8  | 12.0      |
| 70°-80°   | 173.9  | 8.4       |
| 80°-90°   | 98.0   | 4.8       |
| 90°-100°  | 58.4   | 2.8       |
| 100°-110° | 43.2   | 2.1       |
| 110°-120° | 29.0   | 1.4       |
| 120°-130° | 16.3   | 0.8       |
| 130°-140° | 7.1    | 0.3       |
| 140°-150° | 1.4    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 469.4  | 22.8      |
| 0°-40°    | 769.5  | 37.3      |
| 0°-60°    | 1385.4 | 67.2      |
| 0°-90°    | 1905.1 | 92.5      |
| 90°-120°  | 130.6  | 6.3       |
| 90°-150°  | 155.4  | 7.5       |
| 90°-180°  | 155.0  | 7.5       |
| 0°-180°   | 2060.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 604 | 604   | 604 | 604   | 604 |      |
| 5°   | 605 | 603   | 598 | 604   | 603 | 57   |
| 15°  | 580 | 581   | 579 | 585   | 584 | 163  |
| 25°  | 531 | 535   | 537 | 544   | 545 | 244  |
| 35°  | 464 | 472   | 479 | 489   | 491 | 291  |
| 45°  | 387 | 400   | 413 | 424   | 428 | 299  |
| 55°  | 303 | 317   | 338 | 351   | 355 | 270  |
| 65°  | 210 | 232   | 254 | 271   | 277 | 208  |
| 75°  | 116 | 141   | 170 | 189   | 195 | 124  |
| 85°  | 36  | 64    | 95  | 115   | 122 | 37   |
| 90°  | 11  | 38    | 67  | 87    | 92  | 7    |
| 95°  | 9   | 31    | 59  | 77    | 83  | 7    |
| 105° | 6   | 20    | 45  | 62    | 67  | 7    |
| 115° | 4   | 10    | 32  | 47    | 51  | 4    |
| 125° | 3   | 2     | 19  | 32    | 36  | 3    |
| 135° | 1   | 1     | 6   | 17    | 21  | 1    |
| 145° | 1   | 0     | 0   | 4     | 7   | 0    |
| 155° | 0   | 0     | 0   | 0     | 0   | 0    |
| 165° | 0   | 0     | 0   | 0     | 0   | 0    |
| 175° | 0   | 0     | 0   | 0     | 0   | 0    |
| 180° | 0   | 0     | 0   | 0     | 0   | 0    |



TEST NUMBER: P334126

CATALOG NUMBER: S124DS-S575D830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 604.4 | 604.4 | 604.4 | 604.4 | 604.4 |
| 2.5°   | 607.1 | 605.0 | 599.6 | 604.4 | 603.7 |
| 5°     | 605.0 | 603.0 | 598.3 | 603.7 | 603.0 |
| 7.5°   | 601.0 | 599.6 | 595.6 | 601.6 | 601.0 |
| 10°    | 595.6 | 594.9 | 591.5 | 597.6 | 596.9 |
| 12.5°  | 588.1 | 588.1 | 586.1 | 591.5 | 591.5 |
| 15°    | 580.0 | 580.7 | 578.6 | 584.7 | 584.1 |
| 17.5°  | 569.2 | 571.2 | 570.5 | 576.6 | 575.9 |
| 20°    | 557.7 | 559.7 | 560.4 | 567.1 | 567.1 |
| 22.5°  | 544.8 | 547.5 | 548.9 | 555.6 | 557.0 |
| 25°    | 530.6 | 534.6 | 536.7 | 544.1 | 544.8 |
| 27.5°  | 515.0 | 521.1 | 523.8 | 530.6 | 531.3 |
| 30°    | 499.5 | 504.9 | 509.6 | 517.1 | 518.4 |
| 32.5°  | 482.5 | 489.3 | 494.7 | 503.5 | 504.9 |
| 35°    | 464.3 | 472.4 | 479.2 | 488.6 | 490.7 |
| 37.5°  | 446.0 | 455.5 | 463.6 | 473.1 | 475.1 |
| 40°    | 428.4 | 437.2 | 446.7 | 456.8 | 459.5 |
| 42.5°  | 408.1 | 418.2 | 429.7 | 441.3 | 443.3 |
| 45°    | 387.1 | 400.0 | 412.8 | 424.3 | 427.7 |
| 47.5°  | 367.5 | 380.3 | 395.2 | 406.7 | 410.8 |
| 50°    | 345.8 | 360.7 | 375.6 | 389.1 | 393.2 |
| 52.5°  | 324.2 | 339.1 | 356.7 | 370.2 | 374.3 |
| 55°    | 303.2 | 317.4 | 337.7 | 351.2 | 355.3 |
| 57.5°  | 279.5 | 297.1 | 316.7 | 333.0 | 336.4 |
| 60°    | 256.5 | 274.1 | 296.4 | 312.0 | 317.4 |
| 62.5°  | 234.2 | 253.8 | 276.1 | 291.7 | 297.1 |
| 65°    | 209.8 | 231.5 | 254.5 | 271.4 | 276.8 |
| 67.5°  | 186.8 | 209.8 | 234.2 | 251.1 | 256.5 |
| 70°    | 163.1 | 186.1 | 211.8 | 230.1 | 234.8 |
| 72.5°  | 140.1 | 163.8 | 191.5 | 209.1 | 214.5 |
| 75°    | 116.4 | 141.4 | 169.9 | 188.8 | 194.9 |
| 77.5°  | 94.1  | 120.5 | 150.2 | 169.2 | 176.0 |
| 80°    | 73.8  | 100.8 | 130.6 | 150.9 | 156.3 |
| 82.5°  | 53.5  | 81.9  | 111.7 | 132.6 | 138.7 |
| 85°    | 35.9  | 64.3  | 94.7  | 115.1 | 121.8 |
| 87.5°  | 22.3  | 50.1  | 79.9  | 99.5  | 105.6 |
| 90°    | 10.8  | 37.9  | 67.0  | 86.6  | 92.0  |
| 92.5°  | 10.2  | 33.8  | 62.9  | 81.9  | 87.3  |
| 95°    | 8.8   | 31.1  | 58.9  | 77.2  | 83.2  |
| 97.5°  | 8.1   | 27.7  | 55.5  | 73.1  | 79.2  |
| 100°   | 7.4   | 25.0  | 51.4  | 69.7  | 74.4  |
| 102.5° | 7.4   | 22.3  | 48.1  | 65.6  | 71.1  |
| 105°   | 6.1   | 19.6  | 44.7  | 61.6  | 67.0  |
| 107.5° | 6.1   | 17.6  | 41.3  | 58.2  | 62.9  |
| 110°   | 5.4   | 14.9  | 38.6  | 54.1  | 59.6  |



TEST NUMBER: P334126

CATALOG NUMBER: S124DS-S575D830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°  |
|--------|-----|-------|------|-------|------|
| 112.5° | 4.7 | 12.9  | 35.2 | 50.1  | 55.5 |
| 115°   | 4.1 | 10.2  | 31.8 | 46.7  | 51.4 |
| 117.5° | 4.1 | 8.1   | 28.4 | 42.6  | 48.1 |
| 120°   | 3.4 | 5.4   | 25.0 | 38.6  | 44.0 |
| 122.5° | 3.4 | 3.4   | 21.7 | 35.2  | 39.9 |
| 125°   | 2.7 | 2.0   | 18.9 | 31.8  | 35.9 |
| 127.5° | 2.7 | 2.0   | 15.6 | 27.7  | 32.5 |
| 130°   | 2.0 | 1.4   | 12.2 | 24.4  | 28.4 |
| 132.5° | 2.0 | 1.4   | 9.5  | 21.0  | 25.0 |
| 135°   | 1.4 | 1.4   | 6.1  | 16.9  | 21.0 |
| 137.5° | 1.4 | 0.7   | 3.4  | 13.5  | 16.9 |
| 140°   | 1.4 | 0.7   | 1.4  | 10.2  | 13.5 |
| 142.5° | 0.7 | 0.7   | 0.0  | 7.4   | 10.2 |
| 145°   | 0.7 | 0.0   | 0.0  | 4.1   | 6.8  |
| 147.5° | 0.7 | 0.0   | 0.0  | 0.7   | 3.4  |
| 150°   | 0.7 | 0.0   | 0.0  | 0.0   | 0.0  |
| 152.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 155°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 157.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 160°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 162.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 165°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 167.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 170°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 172.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 175°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 177.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 180°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |

(END OF REPORT)